REMARKS

In the Office Action[1], the Examiner rejected claims 1-3 and 5-9 under 35 U.S.C. §103(a) as unpatentable over U.S. Patent No. 6,842,108 to Akiyama et al. ("*Akiyama*") in view of Japanese Patent No. JP8-98227 to Kudo ("*Kudo*"); and rejected claim 4 under 35 U.S.C. §103(a) as unpatentable over *Akiyama*, in view of *Kudo*, and further in view of U.S. Patent No. 6,549,120 to de Buda ("*de Buda*").

Applicants have amended claim 1 and added claim 10. Claims 1-10 are pending in this application.

Applicants respectfully traverse the rejection of claims 1-3 and 5-9 under 35 U.S.C. § 103(a). The prior art cited by the Examiner, *Akiyama* in view of *Kudo*, does not teach or suggest each and every element of claims 1-3 and 5-9. A *prima facie* case of obviousness has, therefore, not been established.

Claim 1 recites a power line communication device including, for example:

> an internal electronic control unit connected to a connection point on a direct-current power line. . . and
> an impedance element configured to conduct a direct current to an external load and inserted between the connection point and the external load, and
> a load control part provided between the impedance element and the external load, the load control part controlled by receiving control signals from the internal electronic control unit to switch on/off the direct current,

(emphasis added). *Akiyama* discloses "a power supply integrated circuit, which enables reduction of size of vehicle apparatuses and allows power supply cable communication that is resistant to noise" (col. 1, lines 60-63). "LPF 11 is connected to the power supply

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[1] The Office Action contains a number of statements reflecting characterizations of the related art and the claims. Regardless of whether any such statement is identified herein, Applicants decline to automatically subscribe to any statement or characterization in the Office Action.

cable 5. It blocks passage of a communication signal as a transmission signal . . . and selectively allows only the power supply voltage to pass, thereby inputting the power supply voltage to the regulator 13" (col. 5, lines 30-35).

There is no teaching, in *Akiyama*, that LPF 11 conducts a direct current to an external load. On the contrary, regulator 13 "converts the input power supply voltage from the LPF 11 into a DC constant voltage to the supplied to the internal circuits and supplies it to the *internal circuits of the ECU*" (emphasis added) (col. 5, lines 36-39).

Even assuming that LPF 11 corresponds to the claimed "impedance element," which Applicants do not concede, the only element between the LPF 11 and any external load that may exist in *Akiyama* is regulator 13 (See Fig. 2). However, *Akiyama* does not teach that regulator 13 is "controlled by receiving control signals from the internal electronic control unit to switch on/off the direct current." Regulator 13 converts a power supply voltage into a DC constant voltage. Therefore, *Akiyama* does not teach or suggest the claimed combination of elements including, for example, "a load control part provided between the impedance element and the external load, the load control part controlled by receiving control signals from the internal electronic control unit to switch on/off the direct current," as recited in claim 1.

The Examiner relies on *Kudo* for allegedly teaching the "known use of a load control by signal-over-powerline arrangement" (Office Action at page 3). Even assuming this assertion is true, *Kudo* fails to cure the deficiencies of *Akiyama* discussed above. *Kudo* discloses that power line 1 is supplied with a power supply having a frequency of 50/60Hz. This power line is a commercial power line, not a direct-current power line (English translation at paragraphs 0002, 0019, 0022). In addition, terminal

block 10, in *Kudo*, includes an impedance upper 12 having such a resonance frequency that "an impedance may be made to increase only the frequency component" (English translation at paragraph 0019). However, *Kudo* does not teach or suggest the claimed combination of elements including, for example, "a load control part provided between the impedance element and the external load, the load control part controlled by receiving control signals from the internal electronic control unit to switch on/off the direct current," as recited in claim 1.

Accordingly, *Akiyama* and *Kudo* fail to establish a *prima facie* case of obviousness with respect to claim 1. Claims 2, 3, and 5-10 depend from claim 1 and are thus also allowable over *Akiyama* in view of *Kudo* for at least the same reasons as claim 1.

Regarding the rejection of claim 4, dependent from claim 1, the Examiner relies on *de Buda* for allegedly teaching "various modulation methods [that] can be used on a power line" (Office Action at page 5). Even assuming this assertion is true, *de Buda* fails to cure the deficiencies of *Akiyama* and *Kudo* discussed above. *de Buda* discloses a power line communications system (col. 4, lines 30-51). However, *de Buda* does not teach or suggest the claimed combination of elements including, for example, "a load control part provided between the impedance element and the external load, the load control part controlled by receiving control signals from the internal electronic control unit to switch on/off the direct current," as recited in claim 1. Therefore, claim 4 is also allowable over *Akiyama*, *Kudo*, and *de Buda* for at least the same reasons as claim 1.

In view of the foregoing amendments and remarks, Applicants respectfully request reconsideration and reexamination of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any required fees to our deposit account 06-0916.

Respectfully submitted,

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